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RECOMMENDATIONS CONCERNING INSECT LOSSES IN PONDEROSA PINE STANDS OF THE MODOC LAVA BEDS NATIONAL MONUMENT

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Recommendations Concerning Insect Losses in Ponderosa Pine Stands of the Modoc Lava Beds National Monument.

Examination of dead and dying trees and reproduction, in company with Ranger Don C. Fisher, on August 25, 1934, revealed an estimated 90% of the mature ponderosa pine already dead or infested and younger trees and reproduction rapidly dying. Even the living trees and reproduction, in the areas seen, looked unhealthy.

The areas on which ponderosa pine stands are growing within the Monument boundaries have environmental conditions near or apparently beyond the minimum critical point for the species. It is known that moisture conditions in the area are critical. In addition, it is evident from the position of the roots on windthrown trees that the soil layer is thin and some stratum, probably of lava rock, has prevented the penetration of tap or lateral roots to a normal depth. A few pockets, having apparently more favorable environmental factors, carry more healthy stands of poles and reproduction.

Although various species of insects, particularly the western pine beetle, mountain pine beetle and flathead borers apparently are the immediate cause of death of the trees and reproduction in the Monument, it is probable that the basic and primary cause of death lies elsewhere. For this reason, it is considered any insect control expenditures would be money wasted unless environmental conditions assume a much more nearly normal and less critical level.

It seems to me that, although present conditions, to some people, might present a really terrible picture of desolation, there is a graphic story and unexcelled educational opportunity offered by the presence of the dead stands. The losses to mature trees, as shown in figure 1, and to reproduction as pictured in figure 2, are representative of a regression of timber type. The ultimate future of the area is shown by figure 3 in which mountain mahogany and juniper constitutes the chief cover with only an occasional ponderosa pine that has been able to withstand conditions. I would suggest that, instead of considering the dead trees a liability, they be made an asset because of their educational value. Their presence could be made the basis for an educational theme on the effects of environmental conditions or the adjustment of vegetational cover to the environment. This theme would be particularly effective if comparison were possible, either through pictures, words, or actual vision with healthy ponderosa pine type stands in other parks and monuments either to the south or north.

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August 29, 1934

- Fig. 1. -

Scene in Mature Stand near Caldwell Caves.

- Fig. 2.-

Dying Reproduction on Road to Indian Wells.

Fig. 3.

Mountain Mahogany Juniper Type near Indian Wells.

MEMORANDUM FOR REGIONAL FORESTER

AN APPRAISAL OF RESULTS OF THE 1931 INSECT CONTROL PROJECTS IN THE MODOC NATIONAL FOREST, CALIFORNIA

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BERKELEY, CALIFORNIA
APRIL 30, 1934